Remarks

Claims 1, 2, 4-8, 12-15, 18-21, 23, 24, 27-29, 36 and 40 are pending. Claims 1, 2, 4-8, 12-15, 18-21, 23, 24, 27-29, 36 and 40 are rejected.

Claims 1, 7, 8, 12, 13, 20 and 21 have been amended. Claims 44 and 45 are new.

Claim 20 is rejected under 35 U.S.C. 112, first paragraph. Claim 20 has been amended to address this rejection.

Claims 7, 8, 12 and 13 are rejected under 35 U.S.C. 112, second paragraph. Claims 7, 8, 12 and 13 have been amended to address these rejections.

Claims 1, 2, 4-8, 13-15, 19-21, 23, 24, 27-29 and 36 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Pat. No. 6,932,914 (LeClair). Claims 18 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over LeClair in view of U.S. Pat. No. 6,605,453 (Ozkan). Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ozkan in view of LeClair.

With regard to claim 1, LeClair does not propagate at least one acoustic wave through the material to exert a radiation force at an exterior surface of the microbubble to controllably manipulate the microbubble. The micro-jet of LeClair is not used to controllably manipulate the target bubble. Rather, the target bubble is used to direct the micro-jet:

> The target bubble serves to attract the re-entrant micro-jet by creating a hydrodynamic condition similar to that of a solid work surface or an orifice. However, the target bubbles, unlike solid work surfaces, are transparent to the jets, and allow the jets to slice through them unimpeded. Target bubbles can therefore be used to direct the powerful re-entrant micro-jets toward a work surface or object without the need for an orifice.

LeClair, col. 5, ll. 20-27.

Claims 2, 4-8, 12-15, 18-20 and 44 depend from claim 1. For the reasons claim 1 is patentable, claims 2, 4-8, 12-15, 18-20 and 44 are patentable.

For the reasons claim 1 is patentable, claim 21 is patentable.

Claims 23, 24, 27-29, 36, 40 and 45 depend from claim 21. For the reasons claim 21 is patentable, claims 23, 24, 27-29, 36, 40 and 45 are patentable.

With regard to claim 44, LeClair does not teach wherein the at least one acoustic wave is generated external to the material. Instead, as explained by Examiner:

> [LeClair] teaches that two bubbles are formed (elements 202 and 200 in Figure 3a and column 6, lines 42-44); these are formed "at approximately the same time" (column 6, lines 44-45); which then expand (column 6, lines 45-47); since the bubbles are formed by vaporizing fluid . . . the force from the pressure wave generated by the rapidly expanding bubble, being in a liquid, will be substantially completely transmitted to the adjacent bubble, and thereby displace it.
>
> Office Action, July 25 2007, p. 4.

The source of the pressure wave that "will be substantially completely transmitted to the adjacent bubble" is the "rapidly expanding bubble." This rapidly expanding bubble is not external to the liquid. Rather, the "rapidly expanding bubble" and "adjacent bubble" are in the same liquid.

For the reasons claim 44 is patentable, claim 45 is patentable.

Applicant's Attorney submits that the claims are in a condition for allowance. Applicant's Attorney respectfully requests a notice to that effect. Applicant's Attorney also

invites a telephone conference if Examiner believes that it will advance the prosecution of this application.

Please charge any fees or credit any overpayments as a result of the filing of this paper to our Deposit Account No. 02-3978.

Respectfully submitted,

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